

# USER MANUAL

2010 EVE LSV  
– ELECTRIC –



THE FUTURE TODAY™

## FORWARD

Thank you for purchasing the EVE Model Fairplay Electric Car. Your EVE model has excellent performance characteristics, fashionable design features and internal systems to provide a comfortable and safe ride.

Your ongoing satisfaction is important to us, therefore, we strongly recommend you read this user manual completely and discuss any questions you have regarding safety and operation with you local Authorized Fairplay dealer.

Please pass this user manual on the next owner so they too might become familiar with the EVE Model.



EVE LSV by Fairplay Electric Cars, LLC  
Assembled: Rancho Dominguez, California USA  
USA Parts Content: 44%  
Motor: USA  
Transmission: Mainland China, PRC

## **PRECAUTIONS**

### **WARNING!!!**

The EVE Model Electric car complies with NHTSA – Title 49 CFR Part 571.500, Low Speed Vehicle regulations. Street legal electric vehicles require license plates and registration before use on public streets. Please comply with all state and local laws and requirements.

### **WARNING!!!**

The RED warning sign shown here appears throughout the user manual. Please pay special attention to these safety warnings in order to prevent injury to your property, driver, occupants and/or other persons around you during operation.

Contents of this user manual are subject to change without notice.

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## OPERATING SYSTEM

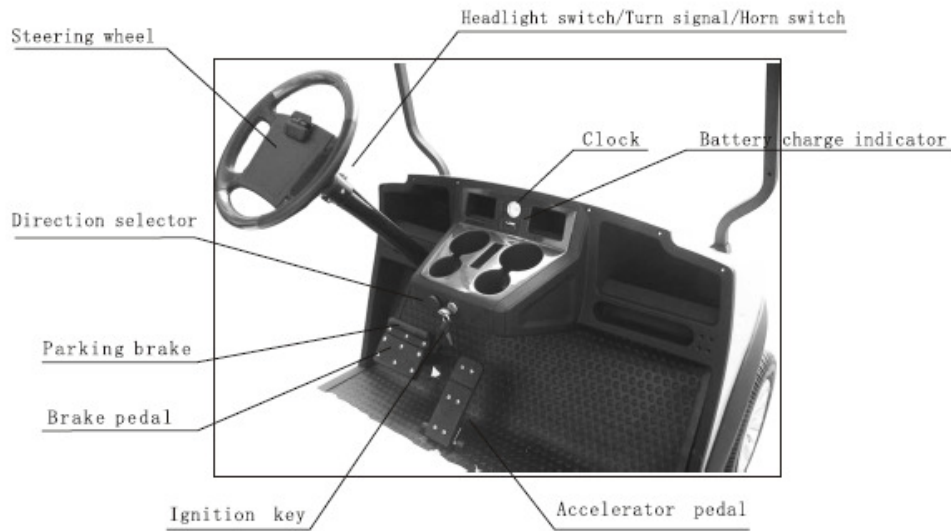


Fig. 1

### **PRE-OPERATION INSPECTION ITEMS**

Your Electric Car received an overall inspection at the manufacturing facility and a final inspection by your local dealer, prior to delivery. However, it is important to acquaint yourself with the controls and operation.

1. Perform your own visual inspection to insure that all parts are secure and appear to be installed properly. Any item that may interfere with your clear view, ability to start and stop the vehicle or use the steering wheel properly to control the direction should be discussed with you local dealer immediately.
2. Check all the printed warning labels located on the car.
3. Check under the seat bottom in the battery area. All wire connections on the battery terminals should be tight, secure and free from corrosion. Your new electric car will be delivered with a full charge. Please read the Maintenance of Batteries and Use of Charger in the Maintenance section, Page 6.
4. Test drive the car for proper braking, acceleration and steering control. When traveling at a speed of 15mph the car should stop smoothly and in a straight line within 15 feet. The Parking Brake should catch securely and hold the car in place on steep grades of 15 degrees or less. The Parking Brake will release by activating the Accelerator or applying pressure to unlatch the Parking Brake.
5. Adjustments to the vehicle speed or braking should be performed by an experienced mechanic or your authorized Fairplay Dealer.
6. Take time to train all other persons who will operate this car and have them become familiar with this user manual.

## **FUNCTIONS OF OPERATING SYSTEM** (See Fig. 1 on page 2)

**Ignition Key** – When not in use, the ignition key should remain in the OFF position with the parking brake latched (See Fig. 2). To activate the flow of power to the motor the key should be turned to the ON position (See Fig. 3) The EVE has a 3<sup>rd</sup> position that activates the 12 volt system, lights, horn and any other accessories wired to the DC to DC power converter (See Fig. 4).



Fig. 2



Fig. 3



Fig. 4

**Direction Selector** – Use the FORWARD/REVERSE switch to select the direction the car will travel. If you want to travel forward, turn the switch to the left side, if you want to travel backwards, turn the switch to the right side (See Fig. 5).

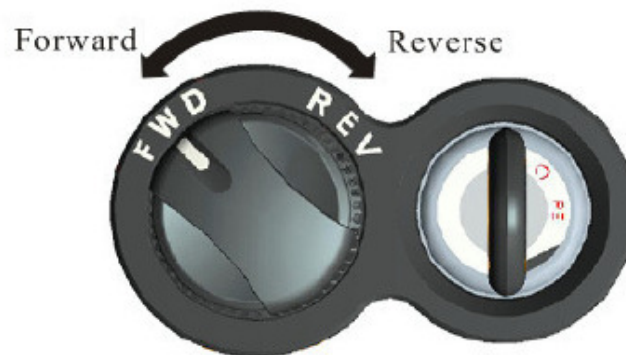


Fig. 5

**Accelerator Pedal** – This will control your speed. Press down slowly to increase speed. The car will speed up with continued pressure applied to the pedal, eventually reaching full speed. The car will slow down as you take pressure off the pedal. When the pedal is fully lifted the electronic brake feature will function. If the car tends to accelerate too quickly or the electronic brake function does not create resistance, stop the car and discuss this with your authorized Fairplay Dealer, or experienced mechanic right away.

**Brake Pedal** – Is used in deceleration or parking. (See *pre-operation inspection items*, page 2. Braking force can be measured with a common bathroom scale and should be set at 65 to 75 pounds. Travel distance of the brake pedal should be 2/3 of the distance from resting to the floor.

Parking Brake – is used to secure the car when unattended or stopped on an incline. (See *pre-operation inspection items, page 2*). If the Parking brake fails to remain in the down position, the Park Brake is not set. Repeat the procedure again until the Park Brake latches safely into place.

**DANGER:**

If you casually set park brake when descending a slope, you should release the park brake by depressing service brake pedal. It is prohibited to release park brake by depressing accelerator pedal in case of personal injury and damage to vehicle.



Fig. 6



Fig. 7



Fig. 8

Steering Wheel – Controls the driving direction

Battery Charge Indicator – There are 10 divisions in the indicator. The indicator will fall from the higher division to the lower ones as the battery discharges. When the battery is too low, the red indicator light will flash reminding you to recharge the battery. Allowing the Batteries to discharge below 2 or 80% discharge could cause permanent damage to the batteries. It is best to charge the batteries after every use. See your *Battery Chargers owner's Manual for complete instructions on how to recharge the electric car batteries*.

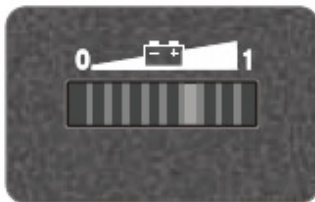


Fig. 9



Fig. 10



Fig. 11 A and B

Clock – To set the clock use the “-” and “+” tabs below clock (See Fig. 10). Only deluxe models have a clock.

**WARNING!!!**

The EVE deluxe Model is equipped with a clock that draws power when turned off. If the vehicle is unused for 30 or more days between recharging, disconnect the batteries to avoid excessive discharge, reset the clock after the batteries are reconnected.

Name Plate – Located beside DC/DC convertor for 2 person car, and inside of the. It displays information on the vehicle (See Fig. 11A and 11B).

Headlight Switch/Turn Signal/Horn Switch - Located on the steering column just below the steering wheel, is activated when the ignition key is in the 3<sup>rd</sup> key position (Fig. 4). Pushing lever forward illuminates front and rear lights. The button on the end of the lever sounds horn.

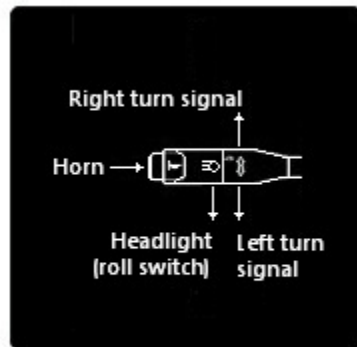


Fig 12



Fig. 13

### **OPERATING PROCEDURES**

1. Turn the Ignition Switch to either ON or (*Light Symbol*) position.
2. Select Forward or Reverse.
3. Gradually press down on the Accelerator Pedal.

**WARNING!!!** If you press down on the Accelerator Pedal before switching the Ignition Key to the ON position, the car will not move. If this happens, release the Accelerator Pedal, then turn the Ignition Key to the ON position FIRST, and repeat. The car should begin to operate properly.

### **RULES FOR SAFE OPERATION**

The operator of the car should have a good understanding of the operating system of the car and its features. Always abide by all rules of safe operation.

- DO NOT – overload the car with people or weight, doing so may cause damage to the motor, the operator may lose control and/or the safety of the operator and passengers will be at risk of serious injury or death.
- DO NOT – let unqualified people to operate the car.
- DO NOT – operate the car while under the influence of drugs, alcohol or any other substance that would impair ones ability to drive.
- DO NOT - climb hills beyond a 20% grade.
- DO NOT – travel across hills beyond a 14% grade.
- DO NOT – overtake other vehicles at crossroads, in blind areas or in other dangerous zones.
- DO NOT – drive the car on unauthorized streets or highways.
- DO NOT – change the FORWARD/REVERSE Switch while the car is moving.
- DO NOT – travel at unsafe speed into turns or on unstable surfaces.

The effectiveness of the Brakes may be reduced if the car is driven through deep water.



## **SAFETY FEATURES**

The EVE Electric vehicle is equipped with the following standard safety features

1. One piece DOT approved windshield
2. Dual front hydraulic disc brakes
3. DOT approved wheels and tires
4. Driver/passenger side DOT approved 3-point harness seat belts
5. Rear and side DOT approved reflex reflectors
6. Driver/passenger side view mirrors



1



2



3



4



5



6

## **MAINTENANCE OF BATTERY**

- 1) The batteries, connection wires and bolts should always be kept clean and dry. If there is electrolyte, wipe it off with a clean cotton cloth, then wash and rinse with water, afterwards re-wipe with a clean cotton cloth. **WARNING!!!** When washing the outside of the battery, make sure the water will not go into the battery cells as it may damage battery.
- 2) Regularly check battery connections to ensure they are in good condition.
- 3) Do not place any objects on the batteries and do not connect the positive pole to the negative pole. This will cause a short circuit, a dangerous spark or damage to the battery.
- 4) After discharging the batteries, regardless of the driving period and mileage driven by the car, the battery should be recharged on the same day. Delaying recharging by more than 24 hours will have a negative effect on the life of the battery.
- 5) During use, the density of the liquid in the batteries will increase while the liquid volume will decrease due to evaporation and electrolysis of water in the electrolyte (especially in hot weather). Check water on regular basis and add distilled water when level gets low.
- 6) No impurity should be allowed to enter the battery. Keep devices used for filling battery clean.
- 7) When driving, the driver should be aware of the Battery Charge Indicator. A drop in the charge means the battery volume is diminishing. Batteries that are over-discharged have a shorter life.
- 8) If the car is not going to be in use for a long time, the batteries should be fully recharged before storing car. The car should be fully recharged every two weeks while in storage. Allow charger to turn off automatically.
- 9) **WARNING!!!** During recharging, the car should be parked in a well-ventilated area with fill caps tightened. Keep away from any flame and sparks to avoid any explosion that could result in physical injury or damage to property.
- 10) When replacing a battery, make sure the new battery is the same specification as the one it is replacing and is appropriate for the application.

## **SCHEDULED MAINTENANCE PROCEDURES**

Scheduled inspection procedures for electric golf cars		
Scheduled	Inspection	
Routine maintenance by owner	Accelerator pedal	Check for normal operation, adjust if necessary
	Accelerator micro switch	Check for normal operation, adjust if necessary
	Batteries	Charge after each use, check water level, DO NOT overfill
	Brake system	Check for normal operation, adjust if necessary
	Charger and socket	Check for normal operation during charging, make sure it is free of damage
	Parking brake system	Check for normal operation, adjust if necessary
	Forward/reverse switch	Check for normal operation
	Steering and electric wiring	Check for normal operation
	Tires	Check air pressure, and wear & tear
	Warning labels	Make sure all labels are legible and installed properly.
Weekly inspection by owner	Battery Terminals	Clean terminals and remove corrosion thoroughly, check electrolyte level.
	Wires and connections	Check for damage, make sure they are secure.
	Entire car	Check for loose parts, tighten as necessary Check maximum speed in forward and reverse (see authorized dealer if problem)
Monthly inspection items by owner or qualified mechanic	Batteries	Clean top of batteries with soda water
	Brake system	Check for normal operation, adjust brake pedal if necessary
		Check brake fluid in reservoir, add if low
	Tires	Check for damage, check air pressure and adjust if necessary
Quarterly inspection items by owner or qualified mechanic	Accelerator micro switch	Check for damage, ensure switch is fixed to the framework
	Check all of the above routine/weekly inspection items	
	Accelerator pedal	Check for normal operation, adjust if necessary
	Driving system	Carry out lubrication as per schedule
	Entire car	Carry out lubrication as per schedule
	Check all routine, weekly, monthly inspection items.	

Semi-annual inspection items to be carried out by qualified mechanic (per 100 rounds or 50 Work hours)	Batteries	Check the specific gravity, electrolyte level height and charging voltage.
	Brake system	Check for normal operation, check if the service brake system has normal movement, clean and adjust as needed.
		Check wear on brake pads (front) and brake shoes (rear), replace if worn.
	Wires	Check for exposure, broken or short-circuit, make needed repairs.
	Forward/reverse switch	Check contact with wire connections to ensure secure connections.
	Front wheel alignment	Check and adjust when necessary.
	Entire car	Carry out lubrication as per schedule.
	Check all of the above routine/weekly/monthly, quarterly inspection items.	
Annual inspection items to be carried out by qualified mechanic only (per 200 rounds or 100 work hours)	Accelerator micro switch	Check for normal operation, remove cap and check for damage.
	Batteries	Carry out discharge test.
	Motor	Check motor brush, replace when necessary
	Front-wheel bearing	Check for smooth movement, adjust or lubricate with chassis lubricating oil if necessary
	Driving axle	Check and fill oil to oil seal position if needed
	Entire car	Carry out lubrication as per schedule.
	Check all of the above routine/weekly/monthly/quarterly semi-annual inspection items.	

### SCHEDULED OILING PROCEDURES

Scheduled interval	Inspection	Position	Recommended lubricating oil
Quarterly inspection items by owner or qualified mechanic	brake pedal main shaft	1	General purpose lithium base grease
	Main shaft and button- head pin	2	General purpose lithium base grease
	shaft, accelerator pedal	3	General purpose lithium base grease
	charge socket	4	General purpose lithium base grease
	front suspension	5	General purpose lithium base grease
Annual inspection items to be carried out by qualified mechanic only (per 200 rounds or 100 hours)	Check drive axle and fill oil to oil seal position	6	Hypoid gear oil
	check front wheel bearing	7	General-purpose lithium base grease

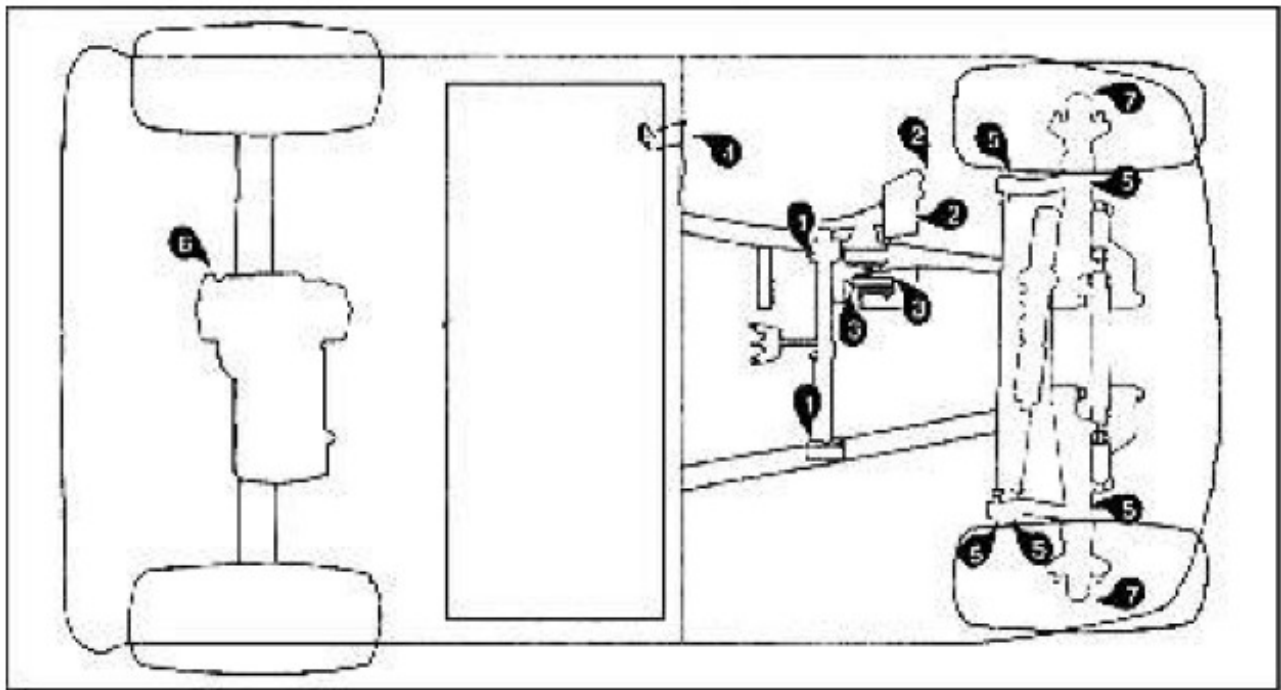


Fig. 14

## **STORING CAR**

1. Fully charge the batteries. (See Maintenance of Battery).
2. Turn the Ignition Key to the OFF position and remove key.
3. Store in an area in which the batteries will not freeze.

## **TOWING OR TRAILER TRANSPORT**

In order to tow the car properly, or move the car without using the motor, turn the Ignition Switch to the OFF position, locate the RUN/TOW switch under the seat in the battery storage area. Select TOW. This will allow the motor to turn freely.



Fig. 15



Fig. 16

**WARNING!!!** If the RUN position is selected during towing, the motor will be permanently damaged.

## **MAINTENANCE OF MOTOR**

- 1) Do not keep the motor running at highest speed for long periods of time.
- 2) **WARNING!!!** Explosive gas vapors in the air may explode if contact is made with sparks generated by the motor. This could cause severe injury and damage to property.
- 3) Removal of mud, sand, and other clinging objects should be done frequently to facilitate heat-radiation
- 4) Periodically use low pressure air to remove dust from the carbon brushes and the commutator.

We recommend you contact your local authorized Fairplay Electric Car dealer or a qualified electrician to work on problems related to the motor or electrical system of your EVE.

## **MAINTENANCE OF SPEED CONTROLLER**

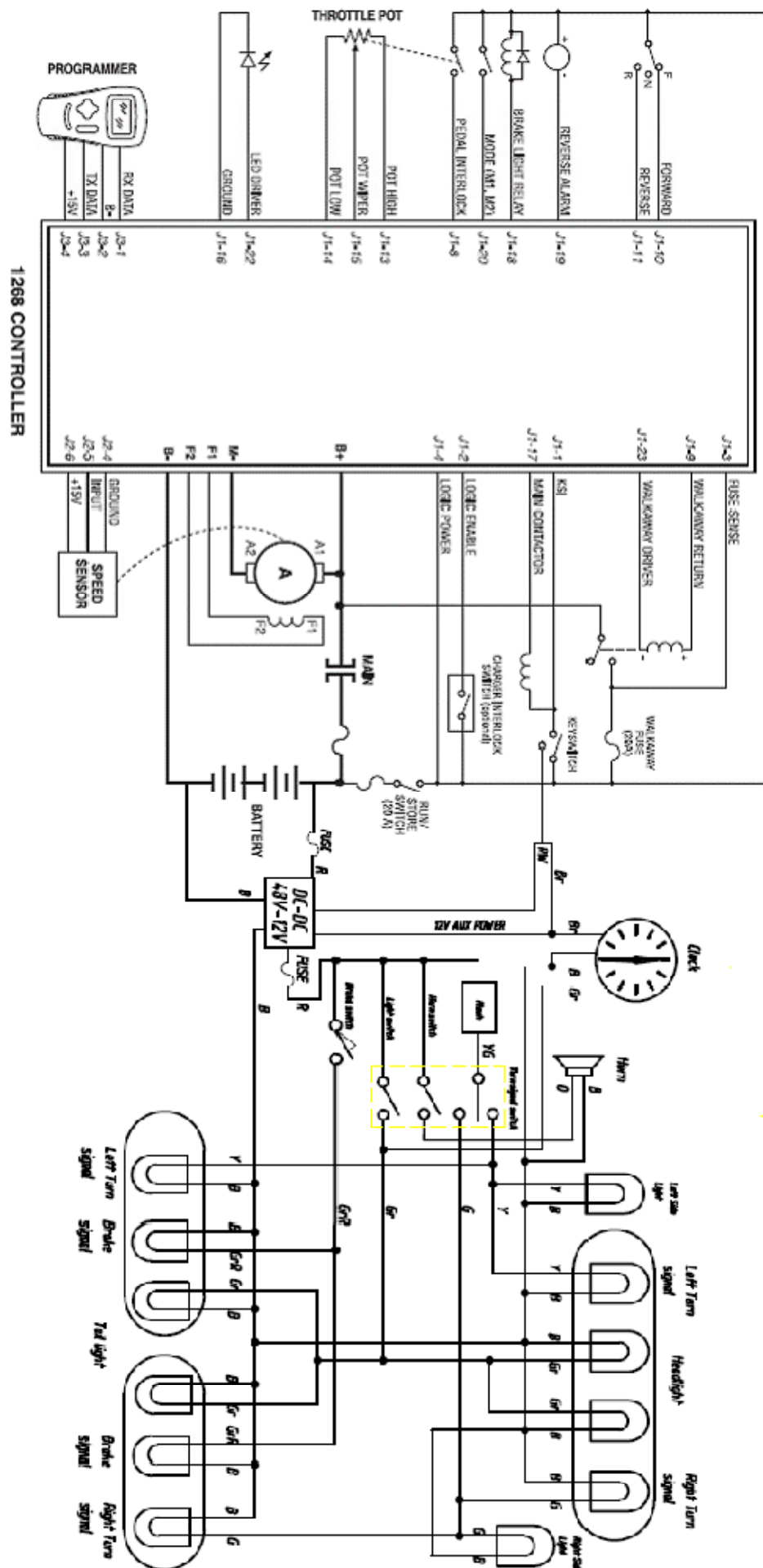
The speed controller of the car is responsible for controlling the speed, motor braking (regenerative braking), torque, high efficiency and low energy consumption by use of its sophisticated solid-state technology.

For any problems related to this component you should contact your local authorized Fairplay Dealer or experienced mechanic.

**WARNING!!!** Any changes, repairs or modifications to the controller or electrical system outside the parameters set by the factory or the original design could void the warranty and/or cause serious damage to the vehicle and/or serious bodily injury to the driver and/or passengers of the car.

## **TROUBLE SHOOTING GUIDE**

Symptom(s)	Possible cause(s)
Car will not start	<ul style="list-style-type: none"><li>A. The controller is not connected to the power<ul style="list-style-type: none"><li>a. malfunction of battery or wire connectors</li><li>b. power connection fuse is blown</li><li>c. the resistance is broken upon charging</li></ul></li><li>B. No signals have been transmitted to the controller.<ul style="list-style-type: none"><li>a. the power is damaged or the connecting wires are not making contact</li><li>b. the accelerator pedal is damaged.</li><li>c. malfunction of accelerator pedal</li><li>d. broken or short circuit of polarity diode</li><li>e. the green wire connecting the accelerator pedal and the pedal and the electrically controlled KSI terminal connector is not working properly.</li></ul></li><li>C. The main connectors stick or are short circuited.</li><li>D. The controller is damaged.</li></ul>
The maximum speed declines	<ul style="list-style-type: none"><li>A. The battery charge is low.</li><li>B. Malfunction of accelerator pedal</li><li>C. Malfunction of controller.</li></ul>





## **FAIRPLAY ELECTRIC CARS®**

### **LIMITED WARRANTY**

#### **WARRANTY:**

**FAIRPLAY ELECTRIC CARS, LLC**, hereby warrants its new EVE electric car purchased from FAIRPLAY ELECTRIC CARS or an authorized distributor, dealer, or agent shall be free from defects in material and workmanship under normal use and service for 3 years on the frame and 2 years on all remaining parts, as terms are defined herein, and subject to the provisions, limitations and exclusions contained in this warranty, to the original owner or Leaser. Batteries and Battery Chargers are covered by the specific manufacturer's warranties.

#### **EXCLUSIONS:**

Excluded from any **FAIRPLAY ELECTRIC CARS** warranty is damage to an electric car or part resulting from a cause other than a defect including poor maintenance, neglect, abuse, accident and collision, maintenance adjustments, unreasonable or unintended use, improper installation of accessories, installation of parts or accessories that are not original equipment, non-approved alteration, and acts of God. Also excluded from any **FAIRPLAY ELECTRIC CARS** warranty are all fuses, filters, decals (except safety decals), lubricants, routine wear items such as the charger plug and receptacle, brake shoes, tires, belts, brushes, brushings, cosmetic deterioration, upholstery and items which deteriorate, fade or fail due to exposure or ordinary wear and tear.

#### **VOIDING OF WARRANTY:**

THIS AND ANY OTHER WARRANTY SHALL BE VOID IF THE ELECTRIC CAR IS ABUSED OR USED IN AN UNINTENDED MANNER OR SHOWS INDICATIONS THAT IT HAS BEEN ALTERED IN ANY WAY, INCLUDING BUT NOT LIMITED TO, MODIFICATION OF THE SPEED GOVERNOR, BRAKING SYSTEM, STEERING, TRANSAXLE, OR OTHER OPERATING SYSTEMS OF THE CAR TO CAUSE IT TO PERFORM OUTSIDE **FAIRPLAY ELECTRIC CARS** SPECIFICATIONS. THE WARRANTY IS LIKEWISE VOID IF THE CAR INVOLVED SHOWS INDICATIONS THAT REASONABLE OR NECESSARY MAINTENANCE AS OUTLINED IN THE USER'S MANUAL AND SERVICE MANUAL WAS NOT PERFORMED AT THE TIME AND IN THE MANNER SPECIFIED IN SUCH MANUALS.

**SOLE REMEDY:**

**FAIRPLAY ELECTRIC CARS** liability under this limited warranty or in any action whether based upon warranty, contract, negligence, strict product liability or otherwise, shall be the repair or replacement, at **FAIRPLAY ECLECTIC CARS** option, of the electric car or part that **FAIRPLAY ELECTRIC CARS** deems to be defective. Replacement shall mean furnishing, during the applicable limited warranty period, a new electric car or factory-reconditioned vehicle or part that is identical or reasonable equivalent to the warranted product or part at no cost to the purchaser. Repair shall mean remedying a defect in the electric car or part thereof at no cost to the purchaser during the limited warranty period. If **FAIRPLAY ELECTRIC CARS** elects to repair the electric car, it may provide factory-reconditioned parts. All parts replaced under warranty shall become the property of **FAIRPLAY ELECTRIC CARS**.

**DISCLAIMER:**

THIS LIMITED WARRANTY IS EXCLUSIVE. **FAIRPLAY ELECTRIC CARS**, ITS AGENTS OR EMPLOYEES, MAKE NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED. ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS OR TIME LIMITS STATED BY THIS WARRANTY ARE HEREBY DISCLAIMED BY **FAIRPLAY ELECTRIC CARS** AND EXCLUDED FROM THE WARRANTY. THE PURCHASER AND **FAIRPLAY ELECTRIC CARS** EXPRESSLY AGREE THAT THE SOLE REMEDY OF THE REPLACEMENT OR REPAIR OF THE DEFECTIVE ELECTRIC CAR OR PART IS THE SOLE REMEDY OF THE PURCHASER. **FAIRPLAY ELECTRIC CARS** MAKES NO OTHER REPRESENTATION NOR HAS THE AUTHORITY TO MAKE OR IMPLY ANY REPRESENTATION, PROMISE OF AGREEMENT, WHICH IN ANY WAY VARIES THE TERMS OF THIS WARRANTY.

**INFORMATION:**

For further information contact **FAIRPLAY ELECTRIC CARS**, 743 Horizon Court, Suite 333, Grand Junction, Colorado 81506: 970-257-0346

**WARNING!!!**

Any modification or alteration of any electric car beyond factory specifications, including those that affect the weight distribution, stability, or speed of the golf car, can cause serious personal injury or death.

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[www.evelsv.com](http://www.evelsv.com)